NORTHERN CALIFORNIA BOTANISTS

BOTANICAL LEAFLETS

ISSUE 34 SUMMER 2025

PRESIDENT'S MESSAGE

We've had a great spring and summer with lots of wildflowers from the abundant rain this winter. I hope all of you have been able to get out and enjoy them! My extended family lost our cabin in the Dixie Fire in 2021 and we now have a new cabin and outbuildings on the property! We need to finish the interior of the cabin and the outbuildings which we hope to do this summer.

We are planning to have our next symposium in **January 2027**. If you are interested in leading a session or giving a talk, please let us know. We will start planning the 2027 symposium this coming fall. We will keep you informed as we develop this upcoming symposium.

Rebecca Nelson has completed her PhD and would like to continue her association with Northern California Botanists as a board member now that she is no longer a student. The board is happy to announce Rebecca is now a new board member. Welcome Rebecca! And a confirmation of the board by the membership will be occurring in the near future.

We have awarded five people the Dean W. Taylor Botanical Exploration Memorial Award for this fourth year of the Award. This award is to honor Dean Taylor's goals of finding unknown botanical diversity in northern California. Each of these five people received this award of $500.00 each. Each of these awardees will be able to add to our knowledge about the botanical diversity in northern California.

We have solicited students to apply for our Barbara Castro Student Research Scholarships and received many great applications. Fourteen scholarships were awarded by Northern California Botanists this year. Three of these were awarded with funds provided by the Shasta and the Sacramento Valley Chapters of the California Native Plant Society. Thank you very much to both of those chapters for providing money for scholarships! The fourteen scholarships varied in amounts up to $1,500.00. Hopefully a new batch of botanists doing vital work in Northern California will develop from those scholarships.

Take care and enjoy the wonderful displays of wildflowers seen this year!

Linnea Hanson
President
Northern California Botanists

MYSTERY PLANT

Once again we bring you a species that is well known by those who spend time in the deserts of southern California. These gray-hairy, somewhat spiny, stiffly-branching shrubs grow up to 1.5 m tall and don't start flowering until well into summer.

Answer on Page 6

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NCB 2025 Symposium Summary

Northern California Botanists (NCB) hosted another great botanical symposium this past January 13-14, 2025. This Symposium, NCB's 13th, was again held on the campus of CSU, Chico: 2 days of presentations, an evening banquet and keynote talk, followed by a day of workshops. In all, 300 people were in attendance plus another 50 or so attending online; 57 of these participants were registered as students. A goal of NCB is to maximize student participation via stipends and low registration rates. More information is available at NCB's symposium webpage: www.norcalbotanists.org/symposia/2025-symposium/

In addition, there were 31 posters presented during the poster session. 18 of these were entered in the Student Poster Contest. The winners were announced during the final afternoon of the Symposium and more information is on the next page.

– First Place - Evan Fotakis, West Valley College
– Second Place - Garrett Goodrich, Claremont Graduate University
– Third Place (tie) - Rachel Tageant, Claremont Graduate University
– Third Place (tie) - Tawny Bolinas, California State University, Chico
– Third Place (tie) - Lynn Breithaupt, University of California, Merced

Videos of the talks and the keynote are posted to the 2025 Symposium webpage, for anyone to stream. Most of the posters are also available there: www.norcalbotanists.org/symposia/2025-symposium/

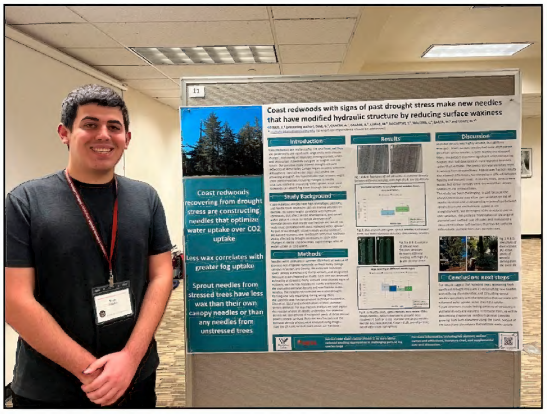
Note that there will not be a NCB Symposium in 2026, but look forward to the next one in January 2027.

For 2026 look for the CNPS Conservation Conference – Growing the Movement Together for native plants – February 5-7, 2026, with Workshops & Field Trips February 4 – in Riverside, CA.

Photos by Linnea Hanson

NCB 2025 Symposium Student Poster Contest Winners

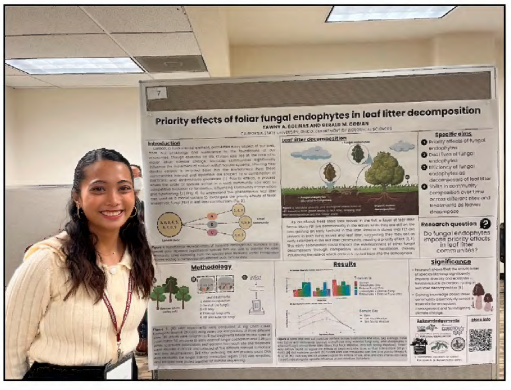
Congratulations to the winners of the student poster contest at this year's Northern California Botanists symposium. There were 18 entries in the contest, which were evaluated by a panel of judges during the symposium. Cash awards were given to the first, second, and third place winners.


Coast redwoods with signs of past drought stress make new needles that have modified hydraulic structure by reducing surface waxiness
Introduction
Results
Discussion
Study Background
Methods
Conclusions and Next Steps
Coast redwoods recovering from drought stress are constructing needles that optimize water uptake over CO2 uptake
Less wax correlates with greater fog uptake
Sprout needles from stressed trees have less wax than their own canopy needles or than any needles from unstressed trees

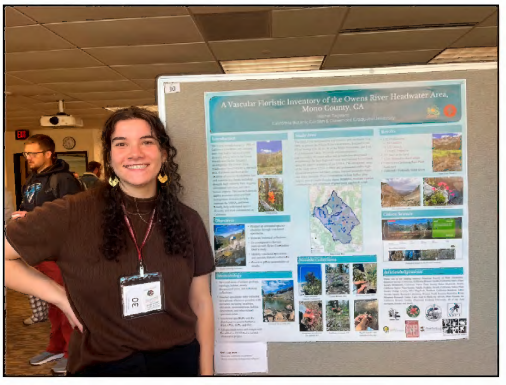
First Place – **Evan Fotakis** (presenting author), West Valley College. Coast redwoods with signs of past drought stress make new needles that have modified hydraulic structure by reducing surface waxiness.

Vascular Flora of the Boulder Creek Watershed, Jennie Lakes Wilderness, and Evans Grove Complex, Fresno and Tulare Counties, CA

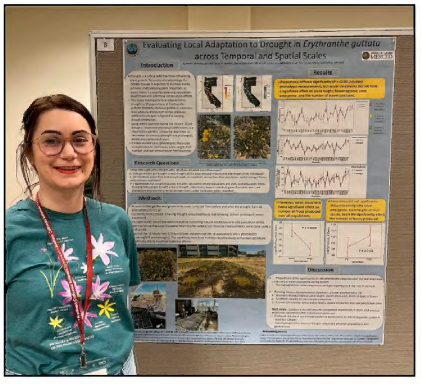
Second Place – **Garrett Goodrich**, Claremont Graduate University. Vascular flora of the Boulder Creek Watershed, Jennie Lakes Wilderness, and Evans Grove Complex, Fresno and Tulare Counties, California.



Third Place (tie) – **Tawny Bolinas**, California State University, Chico. Priority effects of foliar fungal endophytes in leaf litter decomposition.



Third Place (tie) – **Rachel Tageant**, Claremont Graduate University. A floristic inventory of the Owens River Headwater Area, Mono County, California.


Evaluating Local Adaptation to Drought in Erythranthe guttata across Temporal and Spatial Scales
Introduction
Results
Discussion

Third Place (tie) – **Lynn Briethaupt**, University of California, Merced. Evaluating local adaptation to drought in *Erythranthe guttata* across temporal and spatial scales.

Northern California Botanists in Action

In this issue of *Leaflets* we honor a few our valued, and valuable, Federal employees, from among the many deserving of our appreciation and support. Here we celebrate six fantastic botanists.

Aubrie Benterou is a Botanist with the Bureau of Land Management at Fort Ord National Monument. She started with the BLM in 2022 after earning her master's degree in environmental science from California State University, Monterey Bay. As a botanist she leads volunteers and mentors interns to do a variety of botanical and ecological projects across 7,200 acres of public lands. You might find her restoring multiple acres of maritime chaparral in the winter, surveying rare plants in the spring, directing the grazing operation for fuel reduction in the summer, or collecting seed with the Seeds of Success program in the fall. Every year these programs engage over 300 volunteers of all ages. Last year she planted over 3,500 native plants and could not have done it without the help of enthusiastic volunteers, interns, and staff. Her current field days are spent monitoring federally endangered Contra Costa goldfields in vernal pools and assessing wetland habitat for reintroductions of this plant in areas across on Fort Ord. Last winter she planted goldfield starts where they've been extirpated, and the plantings are wildly successful! She is incredibly thankful for the Fort Ord National Monument team for their amazing work and could not have asked for a better group of people to work with.

Blake Engelhardt is a Botanist with the Forest Service, Pacific Southwest (California) Regional Office, based in South Lake Tahoe. In her current role, Blake focuses on supporting consultation and recovery efforts for botanical species listed under the federal Endangered Species Act that occur on California's national forests. This involves providing support and training to botanists on the national forests throughout California, as well as completing programmatic consultations for wide-ranging species like the recently listed whitebark pine and landscape-scale projects to address forest health and restoration. Blake has worked as a botanist for the Forest Service for the past 15 years, during which some of her favorite work has included inventorying fens in the Lake Tahoe Basin, monitoring recovery of lava cap plant communities after the King Fire on the Eldorado NF, and continuing efforts to eradicate leading edge tamarisk infestations in the eastern Sierra on the Inyo NF. Blake earned a B.S. in Ecology and Evolution from UC Davis, followed by an M.S in Natural Resources Management from University of Nevada, Reno, where she studied riparian plant community restoration for her thesis project. Blake started her botany career as a technician collecting baseline plant community data ahead of the re-watering of the Lower Owens River in the eastern Sierra, and enjoys botanizing from the desert to the peaks to the coast of California. She is well known for her emphatic mantra- "YAY Plants!"

Greg de Nevers grew up in the shadow of Mt. Tamalpais, near San Francisco. He received a B.A. in Environmental Studies from the University of California, Santa Cruz and an MA in Education from Lewis & Clark College in Portland, OR. His passion for botany began when he wandered through a field of Fremont's star lilies in bloom. He keyed out his first plant (sun cups, *Camissonia ovata*) at the tender age of 21 using Munz' A California Flora. Greg spent 14 years working for the California Academy of Sciences as Resident Biologist at Pepperwood, the Academy's 3,000 acre nature preserve in Sonoma County, CA. Greg then worked for five years as Resident Biologist at Audubon Canyon Ranch's Bolinas Lagoon Preserve in Marin County, CA. Greg has written floras of Pepperwood; the Kingston Range, an isolated mountain range in the eastern Mojave Desert; and the Comarca of San Blas in Panama, during a three-year period working for the Missouri Botanical Garden and the Smithsonian Institution. Greg has been fortunate to participate in botanical collecting expeditions throughout central America, Columbia, Peru, the Galapagos Islands, and Madagascar and is a specialist in tropical palms. When his family moved to Portland, OR in 2002 he shifted gears

Northern California Botanists in Action – continued

and became a writer (*The California Naturalist Handbook*), then a high school science teacher. He taught high school in the Portland area, and for three years in Cairo, Egypt. After his teaching career Greg was an agroforestry volunteer with the Peace Corps in Guinea, West Africa. Greg is currently the Happy Camp/Oak Knoll District Botanist for the Klamath National Forest, stationed in Happy Camp, CA. His dearest hope for the next phase of his life is to see condors circling overhead while basking in a hot spring. In his spare time he loves exploring, river rafting, gardening, and doing tai chi.

Japhia Huhndorf is a District Botanist on the Mendocino National Forest. Other than a few years spent in Illinois for grad school, she has been botanizing in California since her first botany class as an undergrad student. She started with the Forest Service on the Plumas NF in 2012, and moved to the Mendocino in 2017. Although rare plant surveys continue to be the most fun part of her job, her current priority is finalizing a forest-wide invasive species management project that will greatly expand the tools available for treatment. As part of this project, she got an unexpected – but rewarding – education in working with Tribes. The other major district project is the upcoming removal of Scott Dam (scheduled to begin in 2028). She is currently providing input to PG&E on restoration and revegetation, and she expects that she may very well be working on this project in some form or another until she retires.

Kristie Scarazzo is a Senior Botanist at the Ventura Fish and Wildlife Office. She works in Listing and Recovery primarily on plants and habitats along the Central Coast, and on a few other wildlife species. Kristie's day-to-day workload often consists of completing 5-year status reviews, species status assessments, and recovery plans for federally listed species. In addition, she stays super busy leveraging grant funding for specific plant recovery and habitat restoration projects and supporting, coordinating, and engaging with many different partners to maximize positive outcomes for plants involved in all kinds of other projects, programs, initiatives, and activities. Kristie completed her undergraduate degree at Sonoma State University and her master's at California State Polytechnic University, San Luis Obispo. She even received a grant from NCB for her graduate research. Kristie worked as a private consultant for a number of years and traveled throughout the state as a field botanist before transitioning into the public sector. Before the US Fish and Wildlife Service, Kristie worked at the San Luis Obispo County Public Works Department. Kristie's devoted her life to our collective plant conservation mission and cherishes our state's diverse and beautiful botanical resources. She loves working and connecting with botany students and spreading botanical trivia throughout her assorted networks. She would love to hear from you. Outside of her work life, Kristie enjoys gardening, cooking, baking, reading, and music.

Merissa Strawsine is the District Botanist for the Shasta-Trinity National Forest Recreation Area where she primarily leads efforts in rare plant conservation and invasive species management. Despite growing up in urban Detroit, her love for plants began in preschool when she dreamed of becoming a "flower grower". This early fascination led her to earn a B.S. in Plant Biology from Michigan State University and a M.S in Botany from the University of Otago in New Zealand. Merissa feels incredibly fortunate that this is her first botanist position, as the Shasta-Trinity National Forest has provided an exceptional place to learn and grow. Her favorite part of working on the forest is the abundance of rare and endemic plant species and discovering new populations. She takes great pride in being a civil servant and is dedicated to preserving public lands for future generations.

2025 Dean W. Taylor Botanical Exploration Award

In 2020, we lost Dean William Taylor, a giant of the Northern California botanical community. He had an irrepressible enthusiasm for everything botanical, a genius for teaching, and an unparalleled understanding of the mechanisms driving plant speciation and distribution. His record of outstanding collections and discovery of new taxa speaks for itself. Dean was a champion of the unexplored botanical diversity of California and frequently took the stage at our symposia to encourage people to collect specimens and work to define that diversity. In the absence of his electrifying speeches and reliable advice, we hope that our material support of this Award will help a new generation of botanists fill his shoes.

The aim of the Dean W. Taylor Botanical Exploration Memorial Award is to cover costs associated with botanical exploration in Northern California. This award is open to all people with an interest in the native plants and wildland ecology of Northern California, including students, practicing botanists, land managers, and dedicated herbarium collectors. We encourage projects that echo Dean Taylor's goals of finding unknown botanical diversity in California, namely collecting in under-collected areas, work to explore the habitat and range of known taxa, and efforts to discover and define new taxa.

Applications for the 2026 field season will be accepted from **September 15, 2025** through November 3, 2025.

Congratulations to our 2025 Dean W. Taylor Botanical Exploration Memorial Award recipients! The recipients of this award receive a cash award to further their botanical research. We are pleased to announce the awardees and title of their research. Details about their projects will be shared in the next newsletter.

Natalie Braun, University of California, Merced
Botanical Survey of the Fort Sage OHV Area, Lassen County

Elsa de Becker, University of Illinois at Urbana-Champaign
Calochortus tolmiei in San Mateo, Santa Cruz, and Santa Clara Counties

Sarah De Groot, Kansas State University
Botanical Exploration and Documentation in the Southern Last Chance Range, Death Valley National Park

Hannah Kang, Brigham Young University
Cryptic Species Discovery in the *Navarretia leucocephala* Complex

Hugh Safford, Dept. of Environmental Science and Policy, University of California, Davis
Field surveys for high elevation Jeffrey pine and other trees in the southern Sierra Nevada

Answer to "Mystery Plant":
Psorothamnus polydenius (Fabaceae – Legume family) – Nevada indigo-bush. This is the first report of this species in northern California! Three sites are now known from eastern-most Lassen County, within 1.7 miles (2.75 km) and 5.2 miles (8.4 km) of the state line. These were found on ancient Pleistocene sand dunes along the east side of Honey Lake Valley, as vouchered 11 July 2024 by Lawrence Janeway (*Janeway 14632*, *Janeway 14636*, and *Janeway 14639*). The nearest known California locations are from around Mono Lake, and then much more common south of that. However, the species was already known from Washoe County in this same general area, from 2.8 miles (4.5 km) east of the state line, so this isn't much of an addition to the overall distribution of this species. Interestingly, the Washoe County site was also vouchered by Janeway, 16 June 2017 (*Janeway 12336*), from plants that were in very early bud. Photos by Lawrence Janeway, 11 July 2023.

2025-2026 Barbara Castro Student Botany Research Scholarships

Northern California Botanists (NCB) provides competitive scholarships to undergraduate and graduate students doing botany and plant ecology research in northern and central California. Research scholarships are funded by NCB with the goals of encouraging students to pursue academic endeavors toward a career in botany, promoting undergraduate and graduate botany and plant ecology research, and implementing objectives of the NCB mission. The Sacramento Valley and Shasta Chapters of CNPS generously support this program by providing funding toward additional scholarships.

Students from any accredited college or university doing research within the NCB geographic range may apply for the NCB Barbara Castro Student Botany Research Scholarships. Watch for announcements about the 2026-2027 Awards application period starting next fall.

As in prior years, there were many great research projects to choose from. Congratulations to these students and thank you to all that submitted applications!

Recipient	**Degree**	**University**	**Title of Research Project**
Charles Boissavy	PhD	Claremont Graduate University	Phylogenetics, taxonomy, and biogeography of the Latifolia Clade in *Eriogonum*
Lynn Breithaupt	PhD	University of California, Merced	Potential phenological mismatches in seasonal wetlands: Testing the effects of plant-pollinator timing shifts on plant fitness
Chenjiao Deng *Shasta Chapter Award*	PhD	University of California, Davis	Phylogenomic and species delimitation studies of the genus *Sidalcea* (Malvaceae)
Sebastian Evans	Masters	Cal Poly Humboldt	Trajectories of succession and alpine plant habitat of a recently deglaciated foreland basin in the Trinity Alps, California
Cecilia Girvin	PhD	University of California, Santa Cruz	Conflicting selection via sexual function in *Clarkia unguiculata*
Garrett Goodrich	Masters	Claremont Graduate University	Vascular Flora of the Boulder Creek Watershed, Jennie Lakes Wilderness, and Evans Grove Complex, Fresno and Tulare Counties, CA
Logan Holey	Undergrad	Cal Poly Humboldt	How fluctuations in photosynthetically active radiation under solar panels affect plant communities and their traits
Samantha Ingram	PhD	Claremont Graduate University	Unraveling the taxonomic and phylogenetic complexity of *Ericameria parryi* in the Western United States
Zach Kinman	Masters	Cal Poly Humboldt	Evolution of the Humboldt mule's ears: Testing for budding speciation
Wesley Radford	Masters	State University of New York College of Environmental Science and Forestry	Assessing microbial communities to facilitate climate-resilient forest restoration
Linnea Rydell	Undergrad	University of California, Santa Cruz	The role of anthocyanin in the climatic stress tolerance of *Leptosiphon parviflorus*
Allison Titus	Masters	California State University, Sacramento	Inundation depth affects vernal pool vegetation diversity in California's Central Valley vernal pools
Georgia Vasey	PhD	University of California, Santa Cruz	Restoring native annual forbs in prairies with fire and microsite management
Marielle Wilson	PhD	University of British Columbia	Partial mycoheterotrophy in *Botrychium*

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BOTANISTS

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It's not too soon to
renew your membership for 2026!

Please send address changes to:

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A cooperative association of Federal, State, Academic, Consulting, and other Botanists in the Northern California region, **NORTHERN CALIFORNIA BOTANISTS** is an organization with the purpose of increasing knowledge about botanical issues concerning science, conservation, education, and professional development. Our primary objectives are to establish a communication forum via occasional meetings, scholarship funds for student research and special projects related to botanical problems and exploration in northern California, a job forum, and symposia that focus on the botany of northern California.

MEMBERSHIP APPLICATION/RENEWAL

Name: _____

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MEMBERSHIP DUES:

_____ Individual $25.00 _____ Student/Limited Income $15.00

_____ Family or Small Business/Non-Profit (two memberships) $40.00

In addition, I would like to donate $_____ to Northern California Botanists to help fund NCB programs and student research scholarships.

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